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NEW Outlook FOR THE BLIND

MAY 1955

Basic Content in Rehabilitation
Katharine P. Cavell

Electronic Travel Aids
Clifford M. Witcher, Ph.D.

A State Facility for Blind Retarded
Malcolm J. Farrell, M.D.

PUBLISHED BY THE
AMERICAN FOUNDATION FOR THE BLIND
VOLUME 49

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ROBERT B. IRWIN MEMORIAL ROOM

PLANS ARE GOING FORWARD rapidly at this writing for the dedication of the Robert B. Irwin Memorial Room at the headquarters of the American Foundation for the Blind at 15 West 16th Street in New York. The ceremonies will take place on May 3, approximately the date of the appearance of this issue of the *New Outlook*.

Dr. Irwin, who died in December, 1951, was director of research and education of the American Foundation for the Blind from its founding in 1923 until 1929, and executive director from 1929 to his retirement from the AFB in 1949. He served as executive director of the American Foundation for Overseas Blind until his retirement in 1950.

The Irwin Memorial Room is at the east front on the first floor of the main building. The room has been enlarged and renovated, and will be the repository of Dr. Irwin's library, his portrait in oil by Alexander Farnham, a copy of *As I Saw It*, a book which consists of chapters of Dr. Irwin's projected history of work for the blind during the first half of the present century, and a bound register of the names of the guests at the dedicatory occasion. The publication date of *As I Saw It* will coincide with the dedication of the Memorial Room.

The ceremonies are under the joint sponsorship of the American Foundation for the Blind and its associated organizations, the American Foundation for Overseas Blind and National Industries for the Blind.

Peter J. Salmon, a trustee of the Foundation and friend and fellow-worker with Dr. Irwin throughout many years of co-operative planning and pioneering of services to blind people in this country and abroad, will present the principal eulogy. Mrs. Edna Davis, of Port Orchard, Washington, sister of Dr. Irwin, will formally present the books that comprise the Irwin library. Miss Ruth Wilcox, personal secretary to Dr. Irwin for many years, and assistant and collaborator in many of the studies and other basic projects which he conducted, will unveil the portrait.

Major M. C. Migel, chairman of the Board of Trustees, and former president of the Foundation, and long-time benefactor of blind people and of the Foundation itself, will present the memorial copy of *As I Saw It*.

The room and memorabilia will be formally accepted by William Ziegler, Jr., president of the boards of the three organizations.

The Robert B. Irwin Memorial Room is a fitting tribute to the memory of him whose imprint is so enduringly engraved in the history of work for the blind in the United States and in the world.

Editorially Speaking

IT IS A FELICITOUS tribute to the memory of the late Robert B. Irwin that this month, the Irwin Memorial Room at the headquarters of the American Foundation for the Blind, and also the just published *As I Saw It*—an unfinished chronicle which is but the beginning of what Dr. Irwin had intended to be a history of work for the blind during the last half century—should make their appearance simultaneously.

Anyone who might sit at the desk at which Dr. Irwin labored so prodigiously for almost thirty years, surrounded by so many of his rare collection of books about the blind, and who might glance up at the warm and appealing face so admirably recaptured in oils, would ask himself what manner of man this was whom in our memories we so fondly revere. What was it about him, about his work, that has left us with such imperishable memories in a period rich in great progress for the blind, in great pioneers, in great leaders? And one would inevitably conclude that, more than any other man, it was this man himself who made the times.

Just why was it that Robert B. Irwin was an outstanding leader of his day? We know that his work was his very life. But who among the blind, or what about the blind, were the subject of his especial concern and interest? To most men, one thing above others often enough constitutes that all-absorbing passion which becomes the challenge and the foundation upon which all else rests. But not so here!

The young blind, facing an uncertain future, struggling for the best in the way of education and the best possible tools for learning; the youthful blind braving the new horizons facing those who embark upon a college education; the finger-reader seeking a way out of the confusion and bewilderment occasioned by the multiplicity of embossed types in which was offered the literature of their day; the shut-in or otherwise physically disadvantaged blind unable to read at all; the economically underprivileged, seeking surcease from the economic disaster fastened upon them; the patient thousands pleading for the opportunity for training and employment; the blind wanting but unable to afford to more widely explore the world about them; for these and countless thousands of others, Robert Irwin's fertile imagination and his unflagging zeal worked unceasingly and wrought the miracles which lifted them from the prisons of their minds and bodies and conferred upon them undreamed of opportunities the like of which had never before been known.

Space here is too limited even to begin an inventory of these tremendous achievements. Nor can we stop to reflect upon his efforts, as he neared the sunset of his career, efforts written in the pages of his valiant struggle to rekindle the flames of work for the blind in the war-torn and ravaged countries of Europe, and now, (since his passing) expanded far beyond his fondest hopes and dreams. Uncounted millions throughout the world will benefit, will remember, and will revere his memory.

From the perspective of time, a future generation will some day do better justice to the chronicling of his life and work, and to its impact alike upon the blind and the servants of the blind. As we briefly here rededicate ourselves in his memory, we can envy him his great destiny, that in the annals of the blind, his life is truly a bright moment in the *conscience* of man!

Basic Content in Rehabilitation

KATHARINE P. CAVELL

IT IS NOW AN oft repeated fact that President Eisenhower's first message to Congress carried with it new hope for the disabled. For the first time in history a president's message made direct reference to the federal-state program of vocational rehabilitation. In doing this, the President urged congressional action which would provide funds for expanded services to the vocationally handicapped on a national basis. At the same time, he gave recognition to the complex job of administering these funds and recommended allocation of educational grants which would help provide for the future, professionally trained personnel, to administer this expanded program which would bring rehabilitation services to additional thousands of persons who could thus be helped to achieve more productive and satisfying living. Congress acted favorably on the President's recommendations and suddenly funds became available to colleges and universities to aid in the preparation of professional personnel to work in the field of rehabilitation. Scholarship grants were also available for those students who wished special training to work in this field. Educational institutions across the nation have responded to the opportunity and are currently involved in determining how these monies can best be used to accomplish their intended purpose.

Rehabilitation is a complex and dynamic process, whether it is concerned with the broad goal as set forth in the official definition, "The restoration of the handicapped to the fullest physical, mental, social, vocational and economic usefulness of which they are capable," or whether it is concerned with the somewhat more limited goals of the federal-state program of vocational rehabilitation which is designed to serve disabled persons of employable age, for whom vocational restoration is feasible. With either goal in mind, rehabilitation requires an integrated team approach including doctor, nurse, social worker, physical and occupational therapist, psychologist, vocational rehabilitation counselor and others. It requires, too, the co-ordinated effort of patient, family, school, employer, and many times the services of other community health and welfare agencies. Schools and field alike recognize the importance of incorporating in the training of each member of this interdisciplinary team, a fuller knowledge of rehabilitation goals and processes and a clearer understanding of the place and function of each member of the team to the end that they may work effectively together.

Professional Preparation

The most urgent need, however, is for a well conceived and generally agreed upon plan for the professional preparation of the vocational rehabilitation counselor. Other members of the team represent established disciplines with recognized professional standards and approved educational curricula. The vocational rehabilitation counselor, or rehabilitation counselor, as he

is variously termed, belongs to no such established discipline. He has come to the field of rehabilitation through many avenues of education and experience and has developed "like Topsy," guided by interest and the necessity of a job to be done. Therefore, the present task of those concerned with education for the field is to glean from 35 years of experience in doing and from current developments, a clear concept of the function of the rehabilitation counselor and thence, to determine how best to provide those now in the field, as well as a new generation of counselors, with an educational program which will enable them to take appropriate places as professional persons among other members of the rehabilitation team.

This is not a simple task and already many and varied approaches are being tried. There is also considerable variation in opinion as to what actually constitutes the basic content essential to the function of the rehabilitation counselor. Similar confusion exists as to the appropriate disciplinary auspices under which his training should be provided. My own concept of the job which confronts the vocational rehabilitation counselor and his place on the rehabilitation team, comes from my experience with the Michigan program of vocational rehabilitation and my experiences as a social worker in a number of hospitals, both general and psychiatric. Possibly this discussion will have clearer meaning if I review briefly some of these experiences and my own philosophy of rehabilitation.

During the years 1944 through 1950 it was my privilege to assist in establishing and administering the program of medical services for the Michigan Office of Vocational Rehabilitation. During that time, the agency increasingly provided diagnostic and treatment services for mentally and physically handicapped persons as a first step toward its goal of vocational rehabilitation. Within two years after the establishment of these services, approximately half of the agency's funds, allocated for direct services, was spent in the area of medical care. I mention this because it points to the need of the vocational rehabilitation counselor for basic medical information, for understanding the meaning of illness and for the many knowledges and skills that go into a team approach in rehabilitation. I will come back to this a little later on.

Since 1950, as director of social service at the University Hospital, in Ann Arbor, I have been involved from another angle in the problems of rehabilitation. In seeking solutions to some of these problems, the hospital and the Michigan Office of Vocational Rehabilitation have worked together whenever our joint efforts could best meet the needs of any patient. In addition to referrals made to the eight district offices around the state, the state program, with hospital co-operation, has established a small office within the walls of the hospital to facilitate earlier and more consistent vocational help to patients who are too severely handicapped to be served in their home areas, where resources are often few and widely scattered.

On two occasions, the hospital has provided special institutes which have brought together personnel of the state agency and the hospital for purposes of promoting better understanding of some of the problems—medical, social, and vocational—related to disability and medical care, and more total rehabilitation planning. These opportunities to get together have been eagerly received by both agency and hospital and each time we have moved toward better mutual understanding of our respective places in serving disabled people and toward more effective integration of these services.

Out of these varied experiences of the past eleven years have come certain convictions on my part regarding rehabilitation as a total concept, vocational rehabilitation as one part of total rehabilitation, and some of the special content needed by the vocational rehabilitation counselor in order to carry out his part of the job. Time alone will prove or disprove the validity of these convictions. They have come from experience and may well be changed by further experience. At best, the ideas expressed here present a sketchy view of a complex and important subject.

Rehabilitation is Inclusive

Rehabilitation, as defined above, is so inclusive a concept that it is more an expression of philosophy than a base for considering content needed by various disciplines, which together must translate the concept into living reality for the handicapped person.

To a social worker, this definition of rehabilitation seems simply a term, now commonly used, to describe what has for years been the goal of all good social work. I should add quickly that there may be a distinct difference between a "goal" of social work and the actual function of the social worker. Casework, for example, has sometimes been the sole tool for accomplishing this goal, but more times than not, it has required the co-ordinated services of many community services to bring about the best results.

Thus, the same definition of rehabilitation expresses the goal of the Office of Vocational Rehabilitation, but it is equally true that that agency, by law, by regulation and by other limiting factors, can meet only a small part of the rehabilitation needs of the handicapped. Other disciplines and other agencies are meeting and must increasingly meet, the rehabilitation needs of patients whose problems are outside the legal responsibility of the Office of Vocational Rehabilitation, and similarly, these disciplines and agencies must help to provide the case by case services which the federal-state program is prepared to facilitate, but not necessarily to offer through the direct services of its counselors: medical care, psychological services and social services are among these latter. Because of the very nature of disability, whether physical or mental, with its complex impact upon patient, family and community, a multidisciplined approach and co-ordinated community effort is essential to lasting effectiveness of service.

The services offered by the Office of Vocational Rehabilitation have been and are playing an increasingly important role in the total care of the chronically disabled. I am personally delighted that attention is being directed now to making the job of rehabilitation counselor a truly professional one. Whether or not the knowledges and skills needed by the rehabilitation counselor require the establishment of a new profession with a totally new curriculum or whether they require an enrichment and adaptation of existing curricula, is something for the educators and those now in the field to determine. I do believe that it is essential to recognize that vocational rehabilitation is but one phase of total rehabilitation and not to sort out the responsibilities of other agencies and other disciplines in relation to the broader field of rehabilitation.

Again I find it impossible to consider clearly the content of knowledges and skills needed by the rehabilitation counselor without seeing these in relation to the full needs of the patient. To bring these needs to life it is good to think of rehabilitation as a total experience for the patient, involving all of the feelings which he brings to the experience of disability, interrelated as these

are with the feelings of his family, his friends, his schoolmates, his employer and other associates; affected also by the reactions and attitudes of those who are offering professional counsel and services, the impact upon the patient of the "multi-disciplined" approach, the confusing complexities of large hospitals with their many services, medical care and its often attendant pain and the anxieties about an unknown and frightening future—the threat of "being different."

As the patient moves along with these experiences, the careful timing of services is essential if he is to be able to use the help which is offered. This is sometimes a difficult lesson to learn, but it has significance for the rehabilitation counselor if he is to function effectively. Those who are close to the patient during the early phases of his care, the doctor, the nurse, the social worker and others, must have a sensitive awareness of his stage of emotional, as well as physical, progress and readiness for next steps. They must have skill also in helping the patient to accept and take those next steps. Emotional preparation of the patient, for each successive step in rehabilitation, is as essential as his learning again to walk or talk or to feed himself.

In a medical or psychiatric setting leadership in this phase of rehabilitation is appropriately carried by the medical or psychiatric social worker, with the counsel and support of the physician and members of other disciplines. In the community, other social agencies may be called upon to help with this part of the rehabilitation job.

When vocational counseling is needed, the preparation of the patient to accept and participate in such counseling is one of the most significant contributions of the social worker. When such preparation is accomplished with a severely traumatized patient, it means that the patient has begun to comprehend and to accept his changed physical status and make peace with himself so that he can look and plan ahead on a more realistic basis. The time lapse from injury to this readiness may be measured in weeks, months or years, but until the patient is ready, the rehabilitation counselor is wasting time that he can ill afford if he attempts vocational counseling.

There are, of course, patients for whom earlier vocational counseling aids in the emotional adjustment to disability and again, the recognition of this need is the responsibility of the social worker in consultation with other members of the team. In stressing this point, I am simply trying to distinguish between the functions of the rehabilitation counselor and those of other disciplines. Too often I have seen the counselor turn away from his interview with the patient, puzzled, disappointed and sometimes critical because the patient has not listened, has shown resentment or indecision, or has refused to think of the future as anything but return to his old way of life. "The doctors have told him that he will not walk again, but he pays no attention! He just refuses to face facts." The same situation may prevail when a patient, living in a community, is referred to the Office of Vocational Rehabilitation without adequate preparation.

Function of Vocational Counselor

What then, is the responsibility of the vocational counselor? The official job description states that the rehabilitation counselor is responsible for "initiating and carrying out *rehabilitation* processes with disabled persons." This statement implies a much more total responsibility than is humanly possible when one considers that the "rehabilitation process" frequently begins on the operating table, or in the hospital as a

part of total medical care, or at birth with an infant born blind, or with a cleft palate or cerebral palsy. If the job description were to read, "responsible for initiating and carrying out *vocational* rehabilitation processes" it would seem to me more accurate.

The same job description charges the rehabilitation counselor with responsibility to "assist the applicant in meeting problems of personal and social (as well as vocational) adjustment." Granted that such adjustment is an essential part of rehabilitation and that a skillful counselor will many times be able to help patients over minor hurdles of this nature, I believe that he should not be held responsible for social diagnosis and provision of direct treatment of social and emotional problems. In my observations at least, the very nature of the agency—the complexity of services, the multiplicity of the counselor's responsibilities, the high caseloads, distances to be covered, the constant and increasing pressure for production, makes it impossible for him to assume responsibility for providing the direct treatment of social and emotional problems frequently needed by both patients and family members. It is essential, however, that the counselor be alert to such problems and be familiar with the resources of his community for providing such care. He needs, too, to be skilled in helping patients to use such resources.

In closing, I would like to enumerate and re-emphasize a few of the areas that I believe need particular attention in the professional preparation of the rehabilitation counselor:

I. *Medical information* as a basis for understanding the medical, social and vocational implications of a particular disability.

II. *Understanding* of the meaning of illness and disability for patients, their families and their communities. This should include some understanding of the dynamic processes involved in reaction to and adjustment to disability.

III. *Self-awareness* with the realization that illness and disability in others creates anxieties also in those who work with the disabled person and that these anxieties can get in the way of effective help. The rehabilitation counselor must understand and be able to handle his own reactions to disability if he is to avoid blindly superimposing his own problems upon those of the already burdened patient.

IV. *A comprehensive knowledge* of resources needed to accomplish rehabilitation objectives and skills in working with these resources, whether they be hospitals, schools, social agencies or employers.

V. *Skill in helping* patients make all possible use of available resources.

VI. *Supervised experiences* in working as one member of a full rehabilitation team, to gain understanding and respect for the scope and limits of function of each member of the team and knowledge of how to work effectively as a member of the team.

Social workers, moving from other fields to work in medical settings, usually experience some difficulty in sharing responsibility with other disciplines and yet maintaining their own professional integrity. They sometimes feel limited by the doctor's position of authority or confused because the patient talks about his family problems with his physical therapist. . . . Similarly, the rehabilitation counselor, moving into a medical setting or attempting to work co-operatively with other members of the team, finds it difficult to relinquish leadership and to integrate his areas of appropriate function with those of other disciplines. These are things that can be learned effectively only through experience in a clinical setting.

Human Betterment Anticipated

The future holds tremendous challenge and tremendous possibilities for the rehabilitation counselor. He may be working in the program of vocational rehabilitation, in rehabilitation centers, or in hospitals, but whatever the setting he will become increasingly an important member of the rehabilitation team. Last year under the program of vocational rehabilitation, some 55,000 disabled persons were returned to gainful occupation. Each year an estimated 200,000 persons join the ranks of the handicapped through illness, accident or circumstances of birth. To keep abreast with the needs of this ever growing number, a minimum of 200,000 rehabilitations per year would be necessary. This goal has been set for 1959 but its accomplishment would require little short of a miracle.

It is estimated that at least 4,000 additional rehabilitation counselors will be needed as rapidly as possible. Where are they coming from? How well will they be prepared for the job ahead? This represents the present challenge to education. Whatever direction the colleges and universities take, they must move toward meeting the practical demands of the foreseeable future. In that foreseeable future, the rehabilitation counselor is going to need all the knowledge, understanding and skill that he can be helped to acquire. He will need to work quickly and well. He will have little time for practicing anything we might think of as casework treatment. He will, I believe, need to be most of all a well informed, understanding and skillful vocational counselor and an able facilitator. As such he can play an important role as one member of the total rehabilitation team.

This, as I see it, is an achievable goal for training and indicates the direction toward which such training might be effectively focused.

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Electronic Travel Aids

CLIFFORD M. WITCHER, PH.D.

The likelihood of achieving a practical travel aid for the blind has increased materially during the past five years. Work on this problem is now actively under way at the Biophysical Instrument Company, Philadelphia, Pennsylvania, and also at the Massachusetts Institute of Technology. The Philadelphia project is directed by Thomas Benham, blind physics professor at Haverford College; that at the Massachusetts Institute of Technology is under the writer's direction.

The problem of devising a practical travel aid has occupied the minds of scientists for at least the past 12 years. In fact, during the middle and late 1940's, more than a score of devices intended to warn the blind of obstacles in their path were produced. Without exception, these devices could definitely *detect* most obstacles and, in the case of most of them, could provide rough information on how far the obstacles were from the user. Even so, only one of these early travel aid attempts (the "sensory aid" developed by the U. S. Army Signal Corps) has proved partially successful.

The reasons for the failure of all of these early attempts were quite obscure until about five years ago, but since that time they have become increasingly apparent. We know now, for example, that a usable travel aid *must* do more than simply *detect* obstacles and provide a rough indication of their distances. These things, of course, constitute a necessary first step, but the second, and equally essential, requirement is that the device must present its information to the user at a sufficient speed and in the proper way to enable him to derive practical benefits from it. Furthermore, these benefits must be definitely superior to those provided by a cane which is being used to best advantage, it being assumed that both the travel aid and the cane are supplemented by all the information that a blind person normally receives through his ears.

Requirements

In 1949, the Technical Research Council, a group of professional blind people in New York, began an attempt to translate these ideas into a set of concrete performance requirements for a travel aid. The writer prepared a paper[1] expressing the findings of this group, and last year he carried the analysis somewhat further in another paper[2] presented at the Boston meeting of the American Association for the Advancement of Science. Some of the requirements arrived at may be listed as follows: (1) A travel aid must provide information as to the presence and approximate location of obstacles in a region extending 10 feet in front of the user and approximately 25° on each side of his path. This information

This work was supported in part by the Signal Corps; the Office of Scientific Research, Air Research and Development Command; and the Office of Naval Research. The article is reprinted by permission from *The Blind Professional Journal*, vol. 1, no. 1.

must be of such nature as to permit the user to make definite *decisions* as to whether or not he must change his course to avoid obstacles while maintaining a walking speed of 5 feet per second. (2) The aid must provide definite warnings of all step-downs or drops greater than about 2 inches in height when the user approaches to within 6 to 8 feet of them. (3) The means for transferring information from the aid to the user's brain must not require an excessively long training period and must also allow the user to acquire the information without excessive concentration. In other words, the user must be able to maintain a state of relaxation comparable with that of a person with normal vision when driving a car through normal traffic. (4) The aid *must not* be unduly conspicuous. (5) Its performance *must not* be affected by weather conditions.

Let us now see what steps are currently being taken to achieve an instrument which conforms wholly or in part to these requirements. As already mentioned, the "sensory aid" developed about seven years ago by the U. S. Army Signal Corps is the only device which has thus far proved to be even partially successful when tested extensively by blind users under normal travel conditions. This instrument is primarily intended for the detection of obstacles, but it can be made to detect step-downs if the user pays very close attention to the slight changes in the received signals.

Signal Corps Instrument

Let us take a brief look at the construction of this instrument, since it constitutes the basis for Professor Benham's current work. It is in the form of a small metal box having two lenses on its front end and provided with a rather large carrying handle, not unlike that of an electric iron. A narrow beam of light leaves the box from the lower lens, and the top lens serves to receive the portion of this light which is reflected back when the beam encounters an obstacle. The emergent light beam is interrupted by a small motor and "chopping disk" about 500 times a second, so that the receiving part of the device will be able to distinguish its own light from any other light which may enter the lens. The received light is focussed on a slowly rotating "coding disk" containing concentric rings of holes—4 holes in the inner ring, 8 in the next, and 16 in the outer one. Just behind this disk is a photoelectric cell which serves to convert any light passing through the holes into electric impulses. These impulses, after being amplified, are fed to a vibrator inside the handle of the device. The optical arrangement is such that if the instrument picks up an obstacle 7 to 10 feet away, the received light goes through the inner ring of holes on the coding disk. The resulting signal is a slow succession of pulses of vibration in the handle. As the instrument is moved nearer the obstacle, the received light begins to pass through the middle ring of holes and eventually through the outer one, giving a faster and faster pulse rate in the handle. Thus the user can get a fairly good idea of the distance of an obstacle by gauging the rate at which he feels pulses of vibration in the handle. In use, the instrument is held about as one would hold a brief case and is scanned from side to side of the user's path by a slight rotation of the wrist. The device weighs about 4½ pounds and operates for about 15 hours before its storage battery has to be recharged.

Future Development of Obstacle Detector

The tests of this aid were carried out about two years ago by Professor Benham.[3] Using a total of 67 blind people,

he found that, with a few hours of training, a small fraction (about one-fifth) of them were actually able to benefit from its use in foot travel under normal conditions. It therefore seemed quite reasonable to take this device as a starting point for future development of obstacle detectors, and this is precisely what is being done in Benham's present research project.

This project has, essentially, three basic objectives: (1) to reduce the size and weight of the detector, (2) to reduce the power needed to operate it, and (3) to eliminate the use of moving parts. As this is written, these objectives are well on their way to accomplishment. Benham's latest detector is considerably lighter than the Signal Corps aid, consumes only about one-fifth to one-tenth of the power, and contains no moving parts except the "stimulator" for producing the vibratory signals in the handle. The saving of power and elimination of moving parts are achieved through the use of a so-called "gas discharge" type of light source and the use of transistors instead of vacuum tubes in the electronic circuits. The new obstacle detector will probably be ready for tests within the next few months.

Step-down Detection

The visual replacement project at the Massachusetts Institute of Technology began a little more than three years ago. Up until about six months ago, the chief work of this project was on the problem of step-down detection, but current emphasis is on the development of a combined step-down and obstacle detector with the additional feature of automatic scanning.

The principle of step-down detection was conceived and the first model of a step-down detector completed about two years ago. This model is housed in an aluminum box somewhat like that of the Signal Corps aid but considerably taller (about 8 inches tall at the back and 10 inches at the front). The front wall contains two openings, one for the emergent light beam at the bottom, and one to admit received light at the top. When the box is held normally, as one would hold a brief case, the receiving optical system is very sharply focused on a small spot on the ground or floor about 7 feet in front of the instrument. The light beam from the bottom of the box is likewise directed obliquely downward and is made to swing rapidly back and forth in a vertical plane, so that the region in which the light strikes the ground moves back and forth along a line extending from about 6 to 9 feet in front of the instrument. Thus, with each upward or downward swing of the beam, the light spot on the ground crosses the small area on which the receiver is focused, and a small amount of light is consequently reflected back into the receiver. The net result is that as long as the device is "looking at" level ground the receiver is constantly picking up a succession of pulses of light which are converted into electrical impulses by a photocell. The user is never aware of this continuously received "signal," but it serves to affect certain electronic circuits inside the instrument. Now if the instrument reaches a point at which the receiver is "looking" over the edge of a step-down, there will be a short distance of travel during which *no* light from the device can possibly be picked up by the receiver. Hence the continuous signal is momentarily interrupted. When this condition occurs, electronic circuits in the detector quickly operate to turn on the "alarm," which is felt by the user as a strong vibration in the handle. Thus the detector provides a clear warning of an approaching step-down at a distance of about 7 feet.

Tests with this first model indicated

that it could reliably detect step-downs of two inches or more in height under *favorable* weather conditions. It suffered, however, from two major defects. When it was used on rainy days (times when a travel aid would be most sorely needed), it gave a continual series of false alarms. It was soon realized that this was because the water on the surface of the ground acted almost like a mirror, causing most of the light which reached the ground from the device to be reflected up and away from the instrument, thus leaving almost none to be scattered back to the receiver. It was immediately seen that the only solution to this difficulty lay in the development of a vastly more sensitive receiving system. The second source of trouble was manifested through the production of false alarms when the detector was used in a region containing alternating areas of bright sunlight and shadow. The explanation for this behavior was, as eventually discovered, the fact that certain parts of the electronic circuitry were temporarily disabled by rapid transitions from bright light to shadow.

Early this year it was realized that, if a step-down detector free from these defects were ever to be achieved, a complete redesign was necessary. The first step, which has now been completed, was the development of a much more efficient light source and a far more sensitive optical system for the receiver. In carrying through this part of the work, it was necessary to locate or develop a completely new set of optical components, including a radically new lamp for the light source. Some of the optical components were generously furnished us by the Polaroid Corporation of Cambridge, Mass., and others were donated by the laboratories of the U. S. Army Signal Corps at Fort Monmouth, N. J. The special lamps were made to our specifications by Clifton Found of the General Electric Company's Lamp Development Laboratory at Nelo Park, Ohio.

A Step-down and Obstacle Detector

When the time for assembly of the new components finally came, they proved to be so compact and light in weight that the idea of producing a combined step-down and obstacle detector began to appear practical for the first time. Accordingly, the design was modified to include provisions for obstacle detection.

The principle of step-down detection in the new model is exactly like that already described except that every measure thus far conceivable for eliminating the two major difficulties has been taken. Tests have revealed that the new detector is able to receive a signal from the worst possible type of mud puddle —one with a very black dirt bottom. A small fraction of the instrument's light is diverted from the main beam into an auxiliary beam by means of a prism, and this auxiliary beam serves for obstacle detection in somewhat the same way as in the Signal Corps aid. The receiving system for obstacle detection is located just beneath the step-down detection receiver, and the projection system and vibrator assembly for the light source are located about four inches further down at the lower end of the entire structure. All of these elements are mounted in an aluminum framework which is pivoted about a vertical axis, so that it may be scanned from side to side automatically.

As this is written, our plan is to house the system just described in the front end of a case closely resembling a brief case, so as to eliminate conspicuousness entirely. The front wall of the case will be made of a substance that allows the free passage of invisible infrared radiations but appears quite black to the eye.

Since most of the radiation from the light source is infrared, this infrared filter will have little effect on the sensitivity of the instrument, but will make both the instrument and its light beam completely invisible. The remaining space in the brief case will still be available for normal uses except for a layer about one inch thick on the bottom. Within this layer will be contained the electronic circuits and the single small battery needed for the device. This battery, the so-called "silver cell" is the latest and most efficient type of storage cell in terms of amount of electrical energy per unit of weight. The type which will be used in this device weighs only 7 ounces (this is about one-fifth of the weight of the batteries in the Signal Corps aid) and should operate the instrument for about 20 hours before needing to be recharged. Incidentally, the weight of the entire structure to be housed in the front end of the brief case is only 1.75 pounds, and the components still to be added should not weigh more than another pound, a total of only slightly over 3 pounds.

The information picked up by the device will be fed into the hand, and thence the brain, of the user through the handle of the brief case. This handle has already been developed and tested, and it appears that it is capable of transferring the proper kind of information fast enough to meet the requirements.

It is now quite in order to ask how long it may be before all this work can be expected to yield real benefits for the blind. The writer and Professor Benham, who continually exchange information on the progress of their respective research projects, have discussed just this question many times. At the present time we strongly feel that it should not be more than one to two years before a laboratory model of a complete travel aid, embodying the most fruitful results of all our work, will be ready for rigorous testing by blind subjects under all sorts of travel conditions. This assumes, of course, that no more major unforeseen problems arise. From the time of completion of this first model, it should not be more than two to three years before all necessary tests and modifications have been completed, the instrument engineered for production, and the first production models made available to the blind.

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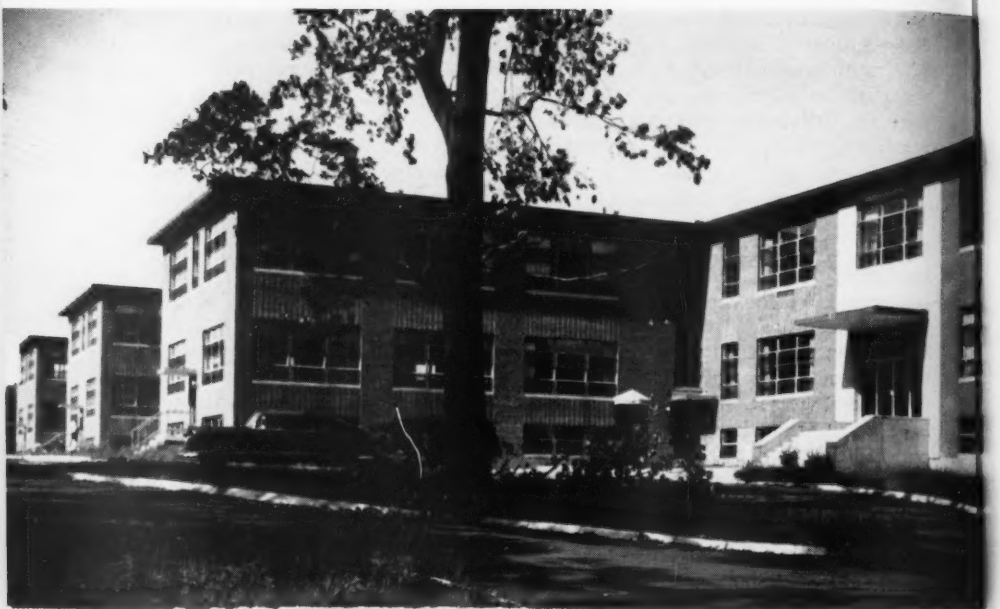

A STATE FACILITY for the Blind Retarded

MALCOLM J. FARRELL, M.D.

SEPTEMBER 13, 1954, marked the beginning of the first complete academic year in the new Ransom A. Greene building for the blind at the Walter E. Fernald State School. This $1,800,000 unit will attempt for the first time anywhere in this country the treatment, instruction, care and training of large groups of retarded blind children. Named for Dr. Ransom A. Greene, a former superintendent of the school, the two-story modern design school and dormitory building provides for approximately 250 patients with complete facilities for their physical and psychiatric care, education, training and recreation.

It is interesting to note that the Fernald School was organized 107 years ago as a part of the then Massachusetts School for the Blind, now the Perkins Institution for the Blind. It was the first institution in this country for mentally retarded children. Methods in the care, education and training of the retarded were pioneered in the new unit. About 1880 its growth was such that it required separation from the parent institution and it was moved to Waltham, known also as Waverly, Mass.

The need for facilities for the blind retarded was recognized by the Massachusetts Legislature in 1945 when it

directed that a commission be formed to investigate and study the advisability of establishing an institution for the care of the blind feebleminded, blind epileptic, and blind feebleminded epileptic persons of the Commonwealth.* This commission was directed to make a report to the General Court on the results of its investigation, to make recommendations, and to draft any legislation necessary to carry its recommendations into effect. The commission on which Dr. Ransom A. Greene, was a member, filed a report in January, 1946** recommending among other things that two buildings for the blind retarded be built on the grounds of the Walter E. Fernald State School. A bill was passed by the legislature and signed by the governor in 1946 authorizing the preparation of plans to construct a building. Construction was actually started in November 1952 and the first patients were received in February 1954. In addition to the school rooms and dormitories mentioned above, the building also includes a gymnasium, swimming pool, beauty shop, barber shop, cafeteria, and library. Complete provisions have been made in the library for the use of Talking Books.

* Chap. 63, Acts of 1945, Mass. Legislature, Approved July 23, 1945.

** Report of Special Unpaid Commission Relative to Blind Feebleminded, Blind Epileptic, and Blind Feebleminded Epileptic persons, Jan. 1946.

Since the legal limit of blindness in Massachusetts is 20/200 with correction in the better eye, everything has been done to highlight brightness for those with limited vision. Occupational therapy shops have been provided where training will be given under the supervision of registered occupational therapists. One of the few concessions to the child's loss of sight is in the swimming pool. Near the edge of the pool the deck rises slightly, warning the swimmer that he is nearing the water. While the facilities of the pool and gymnasium will be made available to others in the population, swimming is particularly helpful for blind patients in that it develops self-confidence and improves co-ordination which is so important for them. Facilities are available for psychotherapy, both individual and

group, physiotherapy and treatment of minor accidents and sickness. One end of the swimming pool can be divided off by a net and used for hydrotherapy of victims of cerebral palsy, poliomyelitis, and other neurological conditions.

Radiant heat is used extensively throughout the building. Bathing facilities are provided so that an individual or pupils from an entire ward may be bathed at one time. Outside the building are concrete walks suitable for roller skating and paved with cork asphalt. Bordering the cork asphalt are three feet of sand to warn the running child that he will bump into a wire fence if he does not stop.

In the short period since the opening of the building, during which we had some opportunity to acquaint ourselves with the problems which might be presented in the education and training of the blind retarded, it has been found advisable to carry on instruction individually or in groups of two or three because complete rapport between teacher and pupil must be established before actual training can begin. The children are first observed on the ward until the teacher becomes so familiar to the child that she no longer presents an additional threat in a new environment. Many of these pupils have been neglected or over-protected by their parents.

Also many have been constantly exposed to educational failure and have been so thwarted and humiliated by their environment that each one presents an entirely different educational and emotional problem. However, in our brief experience the results have been startling. Two little boys are already beginning to read braille, to acquire number sense, and to use the Perkins brailler. Some children and adults have completed units of work in the occupational therapy classes. Much enjoyment is gained through individual music lessons and group singing. The less advanced pupils are less inhibited and are gaining self-confidence to the point where appropriate instruction can be undertaken.

The greatest needs of the blind retarded pupils appear to be in the area of social adjustment. We are well aware that we must continue in an experimental frame of mind since we have had no experience to guide us in the education and training of large groups of blind retarded.

Just as 107 years ago the Commonwealth of Massachusetts answered the need for an institution for retarded children in an institution for the blind, so the Commonwealth today has answered the need for an institution to train the blind retarded in an institution for the retarded.

Rehabilitation Status of Former Students || California School for the Blind

JOSEPHINE BUELL

THIRTY YEARS AGO the employment picture for the blind was dim. The rehabilitation program was new, and its chief function was counseling or guidance. Professional or semi-professional work and business pursuits were the favorite occupations, with skilled occupations, agriculture and service occupations represented to a lesser degree. From the *Report of the Interdepartment Committee,** published by the State of California in 1946, it can be seen that between 1921 and 1933 there were 132 blind people rehabilitated, 56 of them in managerial and professional jobs. Twenty-three were chiropractors, a very popular occupation of the blind at that time.

Between 1934 and 1943** there were 188 blind people rehabilitated, and between 1944 and 1946 there were 342 helped. The blind profited from the war years. It was their first real opportunity to prove their ability. After the war some of the blind had to change jobs, due to circumstances, but they did remain employed. The gains in employment made during the war have been held. The blind today can look forward with considerable hope to employment, whereas twenty or thirty years ago there was little opportunity.

* *Report of the Interdepartment Committee on Study of Problems and Services to the Blind.* Sacramento, Calif.: Assembly of the State of California, 1946, p. 110.

** Ibid., p. 114.

Method and Sample

This is a normative-survey study to determine the status of employment of former students who have left the California School for the Blind between 1940 and 1951. To do the study the writer obtained permission from the superintendent to use confidential files of students leaving the school at the age of 16 or over. These records have no follow-up information filed.

The writer's first intention was to send questionnaires to former students. Upon learning that the available addresses would not produce results, it was decided to procure information on former pupils from Mr. George Fogarty, placement officer and vocational advisor of the California School for the Blind. He comes into contact with these people through conventions and visits to their homes.

Additional information was obtained from the industrial workshops for the blind in California. The superintendents of these shops were very co-operative in giving information on former pupils of the California School for the Blind.

The files of the school indicate that during the twelve-year period, 1940 to 1951, 252 students left at the age of 16 or over. However, the whereabouts of only 199 were known to Mr. Fogarty. Therefore, there were 53, or 21 per

TABLE I

DISTRIBUTION OF OCCUPATIONS OF STUDENTS LEAVING THE CALIFORNIA SCHOOL FOR THE BLIND BETWEEN 1940 AND 1951

Occupations	Number of Male Blind Workers	Occupations	Number of Female Blind Workers
Unemployed	23	Unemployed	17 (23[1])
		Housewife	39
Industrial center	12	Industrial center	10
Assembly work	12	Assembly work	2
Vending stand	7	Vending stand	4
Selling	3	Selling	1
Dark room[2]	5	Dark room[2]	2
Professions	8	Professions	3
Musician	3	Clerk	1
Clerk	3	Self employed	2
Self employed	1	Traveling companion	1
Kitchen help	7	Beggar	1
Janitor	2	Domestic	1
Farm hand	1	Braille transcriber	1
Gardener	2	Waitress	1
Truck driver[3]	2	College student	7
Upholsterer	1		
Quarry worker	1		
Tuner	1		
Messenger	1		
College student	11		
Total	106	Total	93

[1] Six receiving pension and are also housewives.
[2] Refers to development of x-ray films in hospitals.
[3] Regained sight.

cent, of the students unaccounted for and 79 per cent were accounted for.

In Table I is shown the break-down of the employment picture by sex. It is distressing to note that 21.7 per cent of the boys and 18.3 per cent of the girls are unemployed. In a somewhat similar study of former pupils of the Michigan School for the Blind, Fitting* found 27 per cent unemployed. It is interesting to note that the figure for these two schools do not vary a great deal.

Six girls were tallied in both the unemployed and housewife columns in Table I because they were receiving the pension. There have been a substantial number of girls who have become housewives. Of the 93 girls studied, 39, or 41.9 per cent, have married, and 18 of them married sighted men.

Twenty-two students are employed in industrial centers, which is a subsidized means of employment. The vending stand, which is also government sponsored, takes care of 11. Together these total 33, or 16.6 per cent of the entire number listed in Table I.

In Table II college students are considered as unemployed. Excluding housewives, 32.3 per cent of the girls are employed. If employment in industrial centers is discounted, the figures for employed girls becomes 21.5 per cent. When vending stands are eliminated, 17.2 per cent are found to be employed in unsubsidized occupations.

*Fitting, Edward, "Rehabilitation Status of Former Students of the Michigan School for the Blind," *New Outlook for the Blind*, January 1955, p. 23.

TABLE II

VOCATIONAL STATUS OF FORMER PUPILS
EXPRESSED IN PERCENTAGES

	Male and Female	Female	Male
Unemployed[1]	58 or 29.2 per cent	24 or 25.8 per cent	34 or 32.1 per cent
Employed	102 or 51.2 " "	30 or 32.3 " "	72 or 67.9 " "
Housewife	39 or 19.6 " "	39 or 41.9 " "	

[1] Includes college students. They are not now earning money but the outlook is good for those who graduate.

Of 106 former male students 72, or 67.9 per cent, are employed. Twelve, or 11.3 per cent, are employed in industrial centers for the blind, while 7, or 6.6 per cent, are engaged in the vending stand program. Thus 50 per cent are employed in unsubsidized occupations.

The professions account for 11 people, which is 5.5 per cent of the total. This compares favorably with Chapman* who states that with sighted people the percentage is 7.0. At present there are 18 others going to college who may potentially increase those employed in the professions.

Table III shows that there is a favorable comparison between the standardized percentages for sighted workers and the percentages brought out by this study. In the white collar group the blind are behind only 3.5 per cent. In the skilled worker group, the blind are behind 7.9 per cent, but this stands to reason because the skilled trades do not lend themselves well to blind workers. In the present study the blind surpassed the average by 7.4 per cent in the semi-skilled trades, and by 4.0 per cent in the unskilled occupations.

The classification of occupations and the percentages for the sighted workers listed in Table III were obtained from Chapman.* It should be understood that housewives and college students are not included in Table III.

* Chapman, Paul W., *Occupational Guidance*, Atlanta: Turner E. Smith & Co., 1943, p. 26.

Table IV indicates that of those who entered college two-thirds graduated, while one-third dropped out along the way. In 1948 a study was made of 1422 students at the University of California which showed that 877, or 62.4 per cent of the total number entering the University graduated. Thus, the blind college students have done as well as the sighted in terms of successfully completing their collegiate studies. This does not include 18 former students of the California School for the Blind who are now in college.

Somewhat more than half of the blind students who graduated from college entered the professions. This compares favorably with the sighted. In a study made a few years ago the Alumni Association of the University of California found that 42.2 per cent of the graduates entered the professions, while the next largest group, 25.3 per cent, was engaged in work as executives and merchants in the commercial field. There are many blind and sighted students entering college who fail in their ambition to enter the professions.

CONCLUSIONS

1. Homemaking is the most popular occupation of girls leaving the California School for the Blind between 1940 and 1951. Out of 93, 39 married, and 18 of them married sighted men.

2. Since so many girls depend on homemaking in adult life, instruction

TABLE III

A COMPARISON OF OCCUPATIONS OF THE BLIND AND THE SIGHTED

	Number Blind Workers	Percentage Blind Workers	Percentage Sighted Workers	Difference
WHITE COLLAR				
Professional	11			
Proprietary	18			
Clerical	4			
Musician	3			
Messenger	1			
Braille transcriber	1			
Total	38	37.3	40.8	−3.5
SKILLED WORKERS				
Dark room[1]	7			
Tuner	1			
Upholsterer	1			
Total	9	8.9	16.8	−7.9
SEMI-SKILLED WORKERS				
Industrial center	11[2]			
Truck driver[3]	2			
Assembly work	14			
Gardener	2			
Travel companion	1			
Total	30	29.3	21.9	+7.4
UNSKILLED WORKERS				
Industrial center	11[2]			
Farm hand	1			
Beggar	1			
Domestic	1			
Waitress	1			
Kitchen helper	7			
Janitor	2			
Quarry worker	1			
Total	25	24.5	20.5	+4.0

[1] Refers to the development of x-ray films in hospitals.

[2] Arbitrarily half of those employed in industrial centers for the blind were regarded as semi-skilled and half as unskilled workers.

[3] Regained sight.

TABLE IV

STATUS OF THOSE ATTENDING COLLEGE BETWEEN 1940 AND 1951

Total number attending college	28
Number of graduates	19
Those working in professional jobs	11
Those not working in professional jobs	8
Number of students not graduating after entering college	9

in this field should be emphasized during school years.

3. Students leaving the school for the blind either *must* or *do* use the subsidized programs of the industrial centers and the vending stands. It would be interesting to determine if they use these programs as a last resort.

4. The darkroom has filled many vacancies for the totally blind as has the kitchen for the partially sighted. One occupation lends itself well to the totally blind, while the other is good for partially sighted boys.

5. Of the total number of blind workers listed in this study, 5.5 per cent are in the professions, such as teacher, lawyer, and field worker. This compares favorably with 7.0 per cent of sighted

people. When the classification is broadened to white collar workers, the percentage reaches 37.3 as compared to 40.8 per cent for the sighted workers.

6. Discounting the present 18 college students, there are 28 who attended college and of those, two-thirds graduated while one-third dropped out.

7. Of the 19 who attended college, eleven entered the professions, and eight did not.

8. Farming in California may offer more possibilities than the blind have used.

9. The present study shows that only one boy who left the California School for the Blind (between 1940 and 1951) was employed as a piano tuner. This may be due to the fact that piano tuning is not taught at the school. Since piano tuning is a remunerative occupation for the skilled blind individual, its instruction should be encouraged.

10. It is usually believed that music is made more use of than is shown in this study. There are only three out of the entire group who have used it as an occupation. However, many more, no doubt, have used music as a source to supplement their income or as an avocation.

11. It is gratifying to note that begging by former students is practically non-existent.

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Science Recordings on Tape

The following is a communication from Thomas A. Benham, Professor of Physics and Electronics, Haverford College, conveying information about the first science recording made by a committee set up for that purpose last year. Professor Benham presented the needs for such recordings in "Science for the Blind in Recordings," in the October, 1954, issue of the *New Outlook*. The committee which assumed the responsibility of determining the need for such material, as indicated in the above-mentioned articles, is T. A. Benham, Chairman; William B. McIlwaine; Charles Gallozzi.—Editor

WE ARE READY TO ANNOUNCE the first book on tape of what we hope will be a long series of recorded books.

The title of the book is *Essentials of Electricity for Radio and Television*, by Slurzberg and Osterheld, copyright, 1950. McGraw-Hill Book Co., Inc., New York, N. Y. The book requires 24 hours of recorded time and is available at the present time on either twelve two-hour reels or eight three-hour reels. We have not been able to decide as yet whether we should use the longer playing time per reel. There is a possibility that the listener may prefer the shorter playing time. After we have received reactions from those who use the material, perhaps we will be able to settle on one or the other. The speed of playing is 3.75 inches per second on seven-inch reels, two-track plastic base tape.

The book has been revised in considerable detail wherever it was thought that the text in ink print did not convey the meaning to a listening audience. Diagrams and figures have been described in detail with much care given to the choice of words. The tape is accompanied by a braille supplement in which many diagrams and graphs are reproduced in an effort to give the listener a better understanding of the spoken word. Every figure given in the braille supplement is very carefully explained on the tape. There is the briefest summary of information written on the braille page accompanying the figure to help the reader remember certain details associated with the material. The supplement has a list of some of the technical words that appear in the text to provide a better understanding of spelling. The definition is not given in this first attempt because of the feeling that the space required to add the meanings is not justified. The mathematical equations that are thought to be of importance and of particular use are listed in the supplement with the number assigned by the authors of the book following the equation. It is hoped that when the student uses the supplement in conjunction with the tapes, the material will be more easily understood.

To give an estimate of the effort that has gone into the preparation of this book, about 400 man-hours have been expended. There are over 100 pages of hand-written notes to explain figures and pictures. The braille supplement has been prepared on brass plates so that if the idea is practical, the material can be used for other purposes. It is hoped that the manner in which we have prepared the diagrams and graphs will make it possible for them to be used in connection with other books.

Anyone who wishes to study electronics seriously could start with this book. It explains fundamental concepts very clearly and thoroughly. The mathemat-

ics are not difficult; simple algebra is all that is necessary. There are numerous examples. At the end of each chapter there is a group of questions that aids in establishing the degree of understanding of the material covered. There is also a good group of problems at the end of each chapter with answers to many of them.

The book covers circuits not including vacuum tubes. Resistance, impedance, reactance, power relations are treated rather completely for a beginning text. Resonance, filters, bridge circuits, etc., are given considerable attention. We feel that this book will serve as an excellent introduction to the type of circuits that are used in radio, television, and in electronics in general. It is our plan to prepare a second volume that would apply these principles to vacuum tube applications.

The taped copy with braille supplement will be sent to any blind person requesting it. The person receiving the material will be expected to return the tape when finished with it. We have facilities for copying the tape so that the user need not worry about spoiling it. Of course, it would be desirable to get it back intact. However, since the tape is worth about $35.00 we would have to get it back so as to be able to use it again. Send requests to T. A. Benham, Haverford College, Haverford, Pennsylvania.

The Blinded Veteran in the United States

A. B. C. KNUDSON, M.D.

FIRST, THOUGH WE have a very extensive program of medical and vocational rehabilitation of blinded veterans, we have made a very strenuous effort to avoid gathering blind people in groups into any one trade or profession. Having passed through an era in this country when blind piano tuners, mattress makers, basket weavers, and telephone operators were in a status amounting to a caste, it has been our plan to give blinded veterans first a basic capability in common skills, and then if possible to introduce them to whatever special training is suitable to their individual capabilities.

This training in common skills we have regarded as therapy. It has been carried on by government hospitals, at first the Army and Navy hospitals and more recently Veterans Administration hospitals. In this program particular attention has been devoted to mobility skills and mental hygiene. This therapy is covered more satisfactorily in a recent documentary film entitled "The Long Cane."

The basic medical rehabilitation shown in this film is accomplished during approximately four months before the blinded veteran leaves the hospital. While it is in progress, a study is undertaken of the individual capabilities of the blinded veteran from the standpoint of vocational possibilities, with a view to his going on to institutional or on-the-job training as a part of the seeing community, preferably with seeing groups with whom he has something in common other than blindness.

Although the latter phase of his rehabilitation (which occurs after he leaves the hospital) is under the supervision of a branch of the Veterans Administration, known as Vocational Rehabilitation and Education, and although it is paid for by the government, the actual training is given by a large number of civilian educational and vocational organizations, many of which are for the seeing. A very considerable number of our blinded veterans have completed college and university courses since blindness on this basis.

In a list of employed veterans without any useful sight I find the first 20 have the following job titles: radio repairmen; operator of small country store; owner and operator of soft drink business; political campaign manager; concert singer; sculptor of toy wooden animals; sales clerk in liquor business; x-ray darkroom technician; county judge; rehabilitation instructor; farmer; inspector of ceramics; rehabilitation counselor; news-stand operator; masseur; information clerk; laborer; chicken farmer; automobile salesman; rancher.

Among the entire group of 2,000, however, we have only one who chose to qualify as a physical therapist. In this connection, I would like to point out that this is a higher percentage of physical therapists than would be found among 2,000 people of our general population.

Actually, though we are aware that a

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blind person can perform some of the skills of physical therapy, we have not thought it an especially suitable profession for a blind person in the same way that salesmenship, or darkroom x-ray techniques are. It has been our experience through our system of natural selection of occupations that physical therapy is one which requires unusual efforts on the part of the blind person and at the same time rather more concessions on the part of the profession itself in the way of special assistance from seeing persons working on the same treatment team.

The totally blinded individual would of necessity have to rely on sighted assistance or defer to a sighted therapist in certain phases of the program. Some of these factors include: changes in skin color appearing as disease symptoms or signs or resulting from certain types of physical therapy treatment; use of equipment having dial or temperature controls which cannot be adapted to braille letters or numbers; inability to observe and determine visually, reaction to treatment during actual treatment application.

Though it is granted that many of the techniques of physical therapy may be accomplished by a blind person, the fact remains that we cannot assign him to a unit where he must work by himself and expect him to meet all standards of treatment as it would be accomplished by a seeing therapist. Of course there are few occupations where such concessions are not needed by the blind and I have no doubt from what I know of the physical therapy program in Britain that we may have underestimated the possibilities of physical therapy for the blind.

It is always of interest when two cultures so similar as that of Britain and America develop different views on the same subject. I know that one of the disadvantages of our program for blinded veterans is that it tends to favor men with somewhat more than their share of initiative, and our respect for individual choices seems to be a handicap at times to me who seem to wish for a more authoritarian approach. Moreover, employers still have a great way to go in accepting the blind as workers, which puts at a disadvantage sensitive individuals who have no zeal for educating the uninitiated with regard to blindness.

On the other hand, I believe that most blinded veterans are peculiarly fitted to open up new paths for other blind people by their successful performance. Knowing how they felt about blindness before losing their sight, after some experience with blindness, blinded veterans are able to put themselves in the employer's position more effectively, and also help him to distinguish between what is honest concern for the efficiency of his organization and what is age-old superstitious uneasiness over being near a blind person.

I would like to say in closing that we have great respect for the accomplishments of the British war blind programs. Though we have had few opportunities to consult Sir Ian Fraser of St. Dunstan's, members of our staff have had a number of conversations with Col. Edward Baker of the Canadian National Institute for the Blind. I know that both organizations have regard for individual differences in their basic philosophy just as we do. I am told by a member of my staff that Sir Ian once from memory gave a list of 50 occupations engaged in by blinded veterans. There should be no reason why any good way of doing things should not cross the Atlantic in either direction. It may be that your forthcoming issue of the *British Journal of Physical Medicine* will convince us that we should have special training for blind physical therapists. We are presently en-

gaged in a long-term study of the effects of our rehabilitation methods with the war blinded with a view to altering those practices which have not been effective.

Blinded Veteran is Popular Bookbinder

Lawrence L. Peets of West Arlington, Vt., a blinded New England veteran who has learned how to repair and bind books by sense of touch, has become one of the most sought-after bookbinders in the eastern part of the United States.

The 42-year old veteran worked as a carpenter before World War II. After losing his sight, he decided to turn to bookbinding, taking his training at home under Public Law 16.

Today, his services are much in demand by writers, artists, schools, colleges, municipal governments, business organizations, and others.

He has bound and repaired books for well known authors and artists, and has been called on to bind and restore rare volumes in the libraries of a number of large eastern universities.

Peets frequently receives old town and municipal records to be restored and bound. Further, business firms all along the eastern coast of America have sent in orders for bookbinding.

Born in Granville, N. Y., Peets opened his own carpentry shop there after graduating from high school. He joined the Army in 1942 as a medical corpsman attached to the 101st Airborne Division in the ETO. He was wounded once, but returned to duty.

Then in the fall of 1944, a land mine exploded in his face. He lost his left eye, the hearing in his left ear, and suffered severe wounds on his face and hands. But he could still use his right eye.

Back in civilian life in December 1945 he took a job in a New England woodworking mill. Two years later, when he was operating a power saw, a small piece of wood flew back into his right eye, completely blinding him.

Peets applied to the VA for vocational rehabilitation. Testing showed his interest in literature and his mechanical aptitude. Bookbinding combined both. He decided to train for it, even though it is considered a difficult occupation for sighted people.

Arrangements were made for a teacher to visit him at home. Altogether, Peets had three instructors—one who visited him weekly from New York City; a bookbinder from a large printing shop who commuted from Barre, Vt., and the chief bookbinder of Dartmouth College.

While learning bookbinding by touch, Peets also put his carpentry skills to good use, rebuilding his garage into a complete bookbinding shop. Here he had the help of his wife, Marion.

Peets finished his training in 1953. From then on, his business has been steadily increasing. Today he can repair practically any type of book, regardless of its condition, and has fixed some considered hopeless.

For binding, Peets uses linens, plastics, and leather. He has also learned to tool titles and authors' names into the bindings, using his fingers to determine spacing and size. "I may not be able to see," Peets says, "but as long as I can make a living, I'm certainly not handicapped."

—From *BVA Bulletin*

A PORTABLE EXHIBIT KIT

THERE HAS BEEN repeated expression of a demand for a portable exhibit for use by local and state agencies in dressing up presentations of programs to public gatherings. In summary, this exhibit was desired to incorporate the following:

1. Light weight
2. Easy portability
3. Easy set-up and take-down
4. Striking and professional design
5. Very low cost

It was found that, even in quantities, such an exhibit if built by professional display houses, could not meet the fifth requirement—that of low cost. It was found, too, that the fourth requirement could not usually be met by home constructed exhibits. A happy compromise has been evolved, as illustrated above. Your agency name, and any other lettering, would be substituted for those shown in this picture.

The American Foundation for the Blind has had designed by Displayers, Inc., this very striking unit which can readily be built with local resources. Detailed working blueprints and instructions are included in a kit which has also the necessary professional art work to eliminate the homemade look. This comprises a blown up photograph, two feet square, with a silk screened legend in red, mounted on masonite. The agency name can be neatly printed by using commercially available cut-out letters. Illumination can be incorporated or omitted.

The exhibit folds to a package about

3 feet by 2 feet by 1 foot, and opens to 6 feet wide, 3 feet high, and about 2 feet deep. The perforated side panels, and the slant top table, offer easy anchoring of devices as well as literature.

If 50 orders are received, the cost of an individual kit including a photograph of a completed unit, will be $33.00, F.O.B. Kingston, N. Y. Send reservation to American Foundation for the Blind.

BOOK REVIEWS

As I Saw It by Robert B. Irwin. The American Foundation for the Blind, 1955. 205 pages. $2.50. Reviewed by Lucy Armistead Goldthwaite.

Upon his retirement in 1950, Dr. Irwin with characteristic energy had undertaken his long cherished plan of writing a history of work for the blind which was to have covered the last fifty years. No one could have been better equipped for this task as he had taken a leading part in almost every phase of it.

Unfortunately, he lived to complete only these ten chapters which form the slender and attractive volume, *As I Saw It*, published by the American Foundation for the Blind to honor his memory and to preserve in permanent form these first pages of his proposed history.

Dr. Irwin had planned to call his book *Fifty Years of Progress*. A change of title for this small volume was obvious and by some happy inspiration it was called *As I Saw It*. Happy, because we who knew him thought of him always as literally seeing life, not as one with a visual handicap.

The book opens with an admirable Foreword by Major M. C. Migel who as president of the American Foundation for the Blind for over two decades had been closely associated with Dr. Irwin throughout these eventful years. The chapters which follow are: The War of the Dots; Progress in Braille Embossing since 1900; Libraries for the Blind; The Talking Book; Periodicals for the Blind; Education of the Blind; Earning a Living without Benefit of Sight; The Importance of Power to Move about at Will; The Fight for Social Security; and The American Foundation for the Blind.

Before becoming the executive director of the Foundation, Dr. Irwin had served as director of research and education and his aptitude for historical research is in evidence throughout these pages. Take, for example, the chapter on the war of the dots. No more painstaking and detailed account of the development of the uniform type has ever, so far as this reviewer knows, been written.

In each chapter the complete historical background of the subject is presented and then its subsequent progress is recorded, step by step. In the phases of work which it covers, this book should prove a valuable reference tool.

Being first an educator, Dr. Irwin realized keenly the inestimable value of reading for the blind and the lack of literature available to them. It was as if the story found somewhere in Revelation of the angel who came to dispel the spirits of darkness with a rainbow on his head and a book in his hand had been told to him early in life and had remained with him always. His unremitting efforts and his notable achievements in providing more reading for the blind may be traced in the first four chapters of his book.

As I Saw It has been edited with care. Each chapter is preceded by a brief editorial comment and changes which have taken place since the author's death have been noted.

This volume, with a note of elegance

in its specially designed title page and in its general format, is a most appropriate memorial to Robert B. Irwin, the man of whom one of his fellow workers has so truly written: "Of all the great teachers of the blind, none has more brightly illuminated their pathway, none has more richly endowed their spirit, none has more ardently championed their right to a fuller and better life and an equal share in life's opportunities."

Fitting, Edward A. *Evaluation of Adjustment to Blindness.* New York: American Foundation for the Blind. Research Series, No. 2, 1954. $1.00. Reviewed by Lee Myerson, Ph.D.

This well-reported study by Mr. Fitting, Chief of Rehabilitation Services for the Blind in Michigan, is one of the first fruits of the Research Fellowship Program of the American Foundation for the Blind. Like other first fruits, it is perhaps a little unripe and not fully developed. Nevertheless, if subsequent research fellows exert a similar degree of diligent effort and reach a similar level of solid achievement, it is clear that the AFB Research Program will be one of the most vital contemporary forces in improving the psychological guidances of the blind.

Mr. Fitting's problem was to develop an objective instrument for evaluating the adjustment of adults to blindness. Inasmuch as there are presently satisfactory methods for evaluating functional skills and social competence, he concentrated on developing a reliable and valid scale for the measurement of psychological adjustment.

Psychological adjustment was differentiated into six main areas: Morale; Attitude toward Sighted People; Outlook on Blindness; Family Relationships; Attitude toward Training; and Occupational Outlook. The measurement scale was set up by constructing statements about these areas to which blind adolescents and adults were asked to indicate agreement or disagreement; e.g., "It is only natural for blind people to do an awful lot of day-dreaming."

A 90-item scale was reduced, after preliminary try-out and item analysis, to the 42 statements which appeared to be most discriminating between good and poor adjustment. This 42-item scale was then administered to 90 white and 63 Negro subjects in nine selected adjustment centers for the blind. More than half of the total number of subjects, however, were obtained in North Carolina and Alabama.

Split-half reliability of the scale for these subjects, corrected by the Apearman-Brown prophecy, was a satisfactory .9.

The validity of the scale was approached by asking the instructors at the adjustment centers to rate their clients, on a five point scale, for each of the six main areas of psychological adjustment. Ratings of the different instructors were not consistent, however, and some evidence was reported that they did not differentiate between psychological adjustment and functional skills. The correlation between adjustment *score* obtained from the questionnaire and the adjustment *rating* given by the judges was only .34 for the white subjects and .22 for the Negro subjects. These coefficients were improved somewhat when only the data of clients and instructors from North Carolina were used. It cannot be considered, however, that validity of the scale in terms of agreement with an independent external criterion has been demonstrated. Further research will be necessary to determine whether the evaluation scale actually measures adjustment or whether it is confused with other variables.

A major contribution of this study, as

M. Robert Barnett points out in the Foreword, is the honest, detailed and straightforward fashion in which Mr. Fitting has reported his work. "If there are weaknesses in the procedure or in the scale itself, they are out in the open, subject to correction." This is a great advance over some previous psychological work on problems of blindness that has been done.

Some apparent weaknesses of the research may be mentioned:

1. Although Mr. Fitting offers some excellent operational definitions of what he means by adjustment, it is not clear that his questionnaire procedures permitted him to measure it. A forced "yes or no" answer to blunt, empirically derived statements which may have different meanings to different individuals is not one of the most sensitive ways of evaluating personality.

2. The measurement of adjustment was indirect. It was assumed that the personal life adjustment of a blind person could be determined by evaluating his attitudes toward problems of blindness. This is a hazardous procedure. For example, it is conceivable that a person who gives an affirmative answer to the following statement may be both well adjusted and well oriented to reality: "One trouble with many families is that they expect too much from the blind person."

It is common knowledge that blindness presents an ambiguous stimulus to others. Families may easily expect too much or too little or to fluctuate inconsistently between one and the other. It can not be clear, therefore, whether a client who replies to the question in the affirmative is maladjusted as a person or whether he is accurately reporting a difficult condition under which he lives. If it is determined, from other evidence, that the person is poorly adjusted the meaning of his answer will still be obscure. Is he poorly adjusted because of his attitude or because his home situation is such that too much actually is expected of him? Maladjustment of the seeing toward blindness and the blind is not uncommon. Some of Mr. Fitting's data indicate that all of his subjects were adjusted but adjusted to different conditions of life.

3. The rationale for determining whether an affirmative or a negative response is in the direction of adjustment is not always clear. For example, a "no" answer was considered adjustive for the following item: "With proper training a blind person can do just about anything a sighted person can do." However, the well adjusted blind person is simultaneously expected to agree that "A blind person must accept the fact that there are many jobs he simply cannot do" and to disagree with the statement that "A blind person shouldn't have to meet the same standards as others." This is a logically impossible task if the answers cannot be elaborated by the client.

4. The heart of the investigation rests upon the value judgments of the individuals who determined whether agreement or disagreement with a statement was to be considered adjustive. At no point, however, is there any information about the attitudes of these judges! It is notorious that different rehabilitation workers have strikingly different ideas about what constitutes adjustment. For some, the self effacing, submissive blind person is the idea; others strive to promote a "healthy" aggressiveness; while some belittle the entire idea of "adjustment" as being neither necessary nor desirable. It is not certain, therefore, whether the evaluation scale measured the adjustment of the blind subjects or the values of the person who did the judging.

Despite these objections, the great value of Mr. Fitting's study should not

be minimized. One function of research is to stimulate the asking of further relevant questions. Mr. Fitting's detailed presentation of the responses to each item and their relationship with other variables of the person offers sufficient stimulating and provocative questions to promote important additional research for a long time to come.

Current Literature

✪ "Teaching the Blind to Weave," by Eileen Bradford, *Handweaver and Craftsman*, Winter 1954-55. This illustrated article describes the author's introduction to working with blind persons, and how she developed a successful method for teaching them weaving. She gives specific suggestions and detailed instructions.

✪ "The Blind Student in Secondary Education," by Olive Peck, *Bulletin of the National Association of Secondary School Principals*, January 1955. The author speaks to the principal who faces his first experience with a blind pupil in his school. The article has three subheadings: "A Survey of School Facilities for the Blind," "Your Blind Student Will Need Some Special Help," and "Program Adjustments for your Blind Student."

✪ "Industry Asks: Are Blind Machinists Safer?" by Dr. Clifford M. Witcher, *American Machinist*, March 14, 1955. Editorial note: "Most companies employing the blind will confirm that they are not only safer, but more reliable and productive than the average sighted employee. Despite this confirmation, many potential employers of the blind need considerable convincing. Here we describe a training program for machinists, where you might expect more than averaged hazard, that was 100 per cent accident-free, plus some of the tools that permit accurate work by touch."

✪ *Opportunities for the Additionally Handicapped Blind*, by John C. Colligan, Washington, D. C., Office of Vocational Rehabilitation, 1954. Rehabilitation Service Series No. 292. Describes work being done in Britain to help the multiply-handicapped, including Condover Hall, a residential school for children who have multiple handicaps; rehabilitation centers for adult newly blinded and blinded war veterans with additional handicaps; and the problems of the deaf-blind.

✪ "Tin Cups and Poodle Dogs," by M. Robert Barnett, *Philanthropy*, Fall-Winter 1955. The article carries the sub-title: "Many organizations, much money, but no real program," and this concept is developed by the author through statistics and examples of existing conditions and situations. On this basis he presents a list of eight specific projects which should be undertaken. Their mention, however, does not mean that something in these directions has not already been done.

✪ "Enriched Mathematics for the Blind," by Mrs. Frank N. Williams. *The International Journal for the Education of the Blind*, March 1955. A teacher presents her philosophy about teaching blind children, in general, and about mathematics as a cultural subject, specifically. She points out that our modern age shows a greater need for a thorough mastery of mathematics.

✪ " 'Facial Vision': The Perception of Obstacles Out of Doors by Blindfolded and Blindfolded-Deafened Subjects," by

Carol H. Ammons, Philip Worchel, and Karl M. Dallenbach, *American Journal of Psychology*, October 1953. This is the report of a study undertaken to determine whether the conclusions of the Cornell studies, conducted indoors, could be duplicated when experiments were conducted outdoors under conditions approximating more nearly everyday situations encountered by the blind; and whether every person with normal hearing, blind and blindfolded alike, can acquire the ability to perceive obstacles. Experiments conducted at Tulane University in 1947-48 resulted in the conclusion that audition is necessary for the perception of obstacles. Blindfolded subjects possessing normal or near normal hearing quickly learned to perceive obstacles in these experiments, while those blindfolded and deafened varied greatly in their performances.

✪ "The Phenomenal Vertical and Horizontal in Blind and Sighted Subjects," by M. E. Bitterman and P. Worchel, *American Journal of Psychology*, November 1953. A study of orientation to the vertical and horizontal in a group of blind and blindfolded subjects. All performed well in upright position, but performance of both groups was poorer when body was tilted. Less disorientation was shown by the blind subjects. Results are "interpreted as further evidence for the dominance of vision in the orientation of normal individuals."

✪ "But I Know My Baby's Beautiful," by Robert C. Goodman, *Collier's*, February 18, 1955. A human-interest story of Vonda and Tex Ragsdale, blind parents of a year-old girl.

✪ "Freeing the Blind from Their Bonds," by Sir Clutha Mackenzie, *United Nations Review*, January 1955. The author, a United Nations technical assistance expert, explains how the agency serves the sightless. He reports particularly on the year he just spent in Pakistan.

✪ "New Vista for the Blind," by Gregor Ziemer, *Coronet*, February 1955. Describes the development of the raised line drawing board by Harry Sewell, and its great value to the blind.

✪ *Dark Destiny* by Edgar E. Daniels, New York, Vantage Press, Inc., 1954. Written by a practicing psychoanalyst, this is a psychological novel about a blind man who is a ruthless, powerful figure in industry.

✪ The well-known Egyptian writer and educator, Taha Hussein, has a chapter entitled "The Writer in the World Today," included in the book *The Artist in Modern Society* published by UNESCO. This volume is a collection of essays and statements from the International Conference of Artists held in Venice in 1952.

✪ "Their Eyes, We're Told, are Brown," by Rita Rogers as told to Gregor Ziemer, *Good Housekeeping*, June 1955 (on the stands May 19). This article tells in first person style the story of the experience of a blind woman, married to a blind man, who brings up three sighted youngsters, who are now 8, 9, and 11. It tells about their successful efforts to bring up their children in a perfectly normal manner, how they were taught to become independent citizens, to distinguish right from wrong, to play and to adjust to various situations in a normal family situation.

NEWS BRIEFS

✪ The initial copy of the first Jewish prayer book ever published in Hebrew and English braille was presented on March 3 to Dr. David M. Katz, blind New York psychiatrist whose concern for the spiritual needs of the Jewish blind inspired its publication. The presentation was made by Mrs. Louis Ginsberg, chairman of the project, at the national headquarters of the Jewish Braille Institute of America in New York. Publication of the books, in eleven volumes, has been made possible by the contribution of funds from the affiliated Sisterhoods of the National Women's Leagues of the United Synagogue of America. Full sets of the books will be presented as a gift to each blind person who requests them.

An international Hebrew braille code was developed four years ago when the Jewish Braille Institute issued a braille edition of the Hebrew scriptures. For the publication of the prayer book, a simplified Hebrew braille alphabet has been worked out so that the blind may learn to read Hebrew more readily and then to utilize the prayer book to follow the services.

It is estimated that there are 12,000 Jewish blind in the United States eligible for the services of the Jewish Braille Institute, in addition to the Jewish blind in other parts of the world for whom services are also performed by the Institute.

✪ Nearly 1,670 blind vending stand operators and their employees earned approximately $4.8 million during fiscal year 1954, the director of the state-federal program for vocational rehabilitation said recently.

Miss Mary E. Switzer, director of the U. S. Office of Vocational Rehabilitation in the Department of Health, Education and Welfare, said these are the highest net earnings ever recorded by the blind men and women who operate vending stands under the Randolph-Sheppard and state laws.

In fiscal year 1953 net earnings for these businesses were approximately $4.5 million

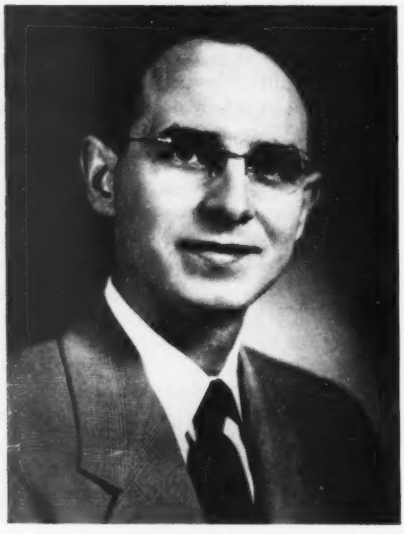
Gross sales in 1954 amounted to nearly $22 million, compared with $20.6 million in fiscal year 1953. This year's record was made by the blind operators with the aid of 272 blind and 629 sighted employees. The blind operators averaged $2,200 each. Virtually all blind persons in the vending stand program were prepared and trained by their state vocational rehabilitation agencies. —From a release by the *U. S. Department of Health, Education and Welfare.*

✪ Educational Week for the Blind was observed again in Philadelphia as in former years, during the week of March 13. Gimbels, in Philadelphia, provided the space of one of the store's show windows, as formerly, for an attractive exhibit which included books and appliances supplied by the Free Circulating Library for the Blind.

In conjunction with the special week, Volunteer Service for the Blind, Inc., paid tribute on March 16 to the unusual services of a group of braille transcribers who have been transcribing books for periods of from 25 to 30 years. Scrolls were presented to the honored guests at a luncheon served on the occasion. Donald G. Patterson, Chief of the Division for the Blind, Library of Congress, addressed the 150 volunteers and their friends.

In still another event of the Educational Week for the Blind, Virginia-born Miss Genevieve Caulfield, of Bangkok, Thailand, received, *in absentia*, a

much-deserved award: a plaque for her "great contribution in the field of education of the sightless" in Thailand. Miss Caulfield, blind herself, has labored almost single-handed for 17 years to break down the traditional indifference to the handicapped in that country. She has demonstrated remarkable success in her efforts.



Alton G. Kloss.

✪ Alton G. Kloss, Superintendent of the Western Pennsylvania School for Blind Children, Pittsburgh, Pa., received the degree of Doctor of Education from the University of Pittsburgh on February 4, 1955.

A graduate of Sharon High School and Westminster College, Dr. Kloss was awarded a Master's Degree in Education from the University of Pittsburgh in 1943.

His doctoral thesis, "A Plan for the Improvement of the Educational Program and Supporting Facilities of the Western Pennsylvania School for Blind Children," includes an analysis of the school's past operations as well as a detailed blueprint of its future activities.

Dr. Kloss is the father of blind twin sons born in 1949 at Greenville, Pa., where he served as director of admissions and placement at Thiel College. Because of his desire to help solve the educational problems of his own sons as well as the problems facing other blind children, he left a promising career in the field of college administration to devote his life to the education of the blind. He came to the Pittsburgh school as superintendent in 1950.

APPOINTMENTS

✪ E. Emory Ferebee has been appointed Deputy Director of the Office of Vocational Rehabilitation, Oveta Culp Hobby, Secretary of the U. S. Department of Health, Education and Welfare, has announced.

Mr. Ferebee left a position as principal examiner for the Bureau of the Budget to assist Miss Mary E. Switzer in the administration of the expanded state-federal program of vocational rehabilitation for disabled civilians. He has been with the Bureau of the Budget since 1944.

Prior to that, Mr. Ferebee had served as head of the liaison office of the old War Manpower Commission and as deputy chief of the Rubber and Rubber Products Branch of the War Production Board.

His state administrative experience was gained as chief statistician and director of allocations and statistics for the Illinois Emergency Relief Commission.

Prior to entering governmental work, Mr. Ferebee was assistant professor of business administration at Washington and Lee University at Lexington, Va.,

for two years and professor of economics at Iowa State Teachers College, Cedar Falls, Iowa, for one year.

A Virginian, Mr. Ferebee received his bachelor of science degree from the University of Virginia in 1924, his master of science at the same university in 1925, and was awarded a degree as doctor of philosophy at the University of Chicago in 1932.

AROUND THE WORLD

✪ A new braille printing plant is now producing text books for the blind

population of the entire Island of Formosa. Formerly, schools for the blind in Formosa had no text books except as students made them for themselves. Books and other literature are now being produced in quantity, with the government furnishing the braille paper.

✪ Construction of a new rehabilitation center for blind women at the Ebenezer

School for the Blind in Hong Kong is progressing rapidly. Situated on the school grounds, it will relieve congestion in other buildings. The original school now will be conducted on a co-educational basis, providing the first adequate facilities for the education of blind boys.

✪ The German Federal Republic has made a contribution of 10,000 marks to further the work of the World Council for the Welfare of the Blind. Eric T. Boulter, Secretary General of the World Council accepted the check at the West German Consulate in New York on March 10. Dr. Margarete Bitter, West German Consul in New York, made the presentation.

✪ Dr. John E. Bryan has arrived in Seoul, Korea, to assume his new duties as Consultant on Education to the American Foundation for Overseas Blind's Mission to South Korea. Dr. Bryan, former president of the Alabama Institute for Deaf and Blind, Talladega, Alabama, left Birmingham for the Far East on March 22. He was accompanied by his wife, Mrs. Gladys Kerr Bryan, who also will serve as a member of the Mission. Herman H. Roose, who has

been in South Korea since early 1955, is in charge of AFOB operations there.

✪ The Royal National Institute for the Blind has announced plans for publication of a new monthly periodical, "Braille Listener".

According to the RNIB announcement the projected publication will be based on radio and sound and will contain articles from the printed "Listener" which have not previously been broadcast, "together with the most engaging and telling comments on current programs and personalities from other radio papers". Also included will be book reviews, a radio quiz and a section devoted to amateur radio transmission. Vernon H. Barlow, RNIB General Editor, said the Institute hopes in the future "to build up a service of special topical information concerning highlights in overseas broadcasts such as musical festivals of world interest, sports and international items."

IN THIS ISSUE

KATHERINE CAVELL writes a thought-provoking article on the question of "Basic Content in Rehabilitation" in this issue. Mrs. Cavell is at present director of the Social Service Department, University Hospital, University of Michigan at Ann Arbor. She has held many other positions including that of medical social consultant and supervisor of medical service, OVR, Michigan, and field instructor of medical social work at Western Reserve University in Cleveland, Ohio. She holds a B.A. degree from Cornell University, and an M.S.S. from Smith College School for Social Work.

A GROUP OF OUTSTANDING blind scientists has made marked progress in electronic aids since World War II. Clifford M. Witcher is one of these men. He has his Ph.D. degree from Columbia University, and is a research physicist at Massachusetts Institute of Technology. Previously he did research work in electronics with reference to aids for the blind at the American Foundation for the Blind, at Bell Telephone Company and at Haskins Laboratories. He was also physics instructor at West Georgia College. Dr. Witcher is 40 years old.

DR. MALCOLM J. FARRELL, Superintendent of the Walter E. Fernald State School at Waverly, Mass., presents an interesting report on the first year's operation of the new unit added to the state school to take care of blind retarded children. Dr. Farrell is a graduate of Tufts College, School of Liberal Arts, and also Tufts Medical School. He is a diplomate of the American Board of Psychiatry and Neurology and is at present both superintendent of the Fernald School and an instructor of psychiatry at Boston University and Tufts College. He is also a civilian consultant to the surgeon-general of the U. S. Army and to the Boston VA hospital. He is the author of over 45 papers on medical and psychiatric subjects. Dr. Farrell has been superintendent at Fernald since 1945.

JOSEPHINE BUELL, who presents a study of the employment of former students of the California School for the Blind, is a teacher at that school at present. She has also taught at Overbrook and at the Michigan School for the Blind. Previous to that she taught for two years in the New Jersey public schools. She took her A.B. degree at Paterson, New Jersey, Teachers College, and has done graduate work at Columbia, Michigan Normal and the San Francisco State College. She is an active member of the AAIB and other organizations dealing with the visually handicapped.

THE ARTICLE BY Dr. A. B. C. Knudson, Director of Physical Medicine and Rehabilitation Service of the Veterans Administra-

tion, Washington, D. C., "The Blinded Veteran in the United States," is reprinted from the *British Journal of Physical Medicine*. Dr. Knudson wrote this article in the form of a letter, replying to an invitation extended to him to discuss the differences in approach in Britain and the United States.

CLASSIFIED CORNER

BEACON LODGE, Pennsylvania camp for the blind, will be opened June 25th and closed August 27, 1955. Applications from Penna. will be given first consideration, but blind people from other states will be considered if space permits. A well-rounded program of recreation is planned. The camp fee is $35.00 per week and guests may stay one or two weeks. In most cases, blind people come through sponsorships provided by service clubs or individuals. Those wishing to register should contact Carl Shoemaker, Beacon Lodge-Camp for the Blind, Lewistown, Penna.

POSITION WANTED: As piano tuning instructor. Will go anywhere in the U.S. 35 years old, 30 per cent normal sight, married with 2 children. Graduate of high school and tuning department of Perkins Institution. Fourteen consecutive years of experience as tuner, including work for many fine piano teachers, local conservatory, University of Maine, music stores, and radio stations. Write *New Outlook* Box 7-A.

POSITION AVAILABLE: Instructor for the blind to operate within a program providing personal adjustment and vocational evaluation services is needed in Dayton, Ohio. Instructor will be a member of a professional team providing services in a comprehensive rehabilitation agency. Write Wallace D. Watkins, Director, Services for the Blind, Goodwill Industries, 201 West Fifth St., Dayton 2, Ohio.

POSITION WANTED: blind Negro teacher wants position in residential school for the blind. Graduate of W. Va. State College; M.A. degree from Hampton Institute; also graduate of Harvard Perkins class of '40 and three summer credits from Harvard and one from Boston University in psychology. Hold Grade A teaching certificate from AAIB. Write *New Outlook* Box 10-A.

APPLICATIONS invited for the post of Director of Rehabilitation Center for the Blind being established in Haifa, Israel. Duties will include setting up services and administrative procedures and selection and training of staff. Duration of appointment about 2 years, beginning fall of 1955. Must have satisfactory training and experience in area of rehabilitation. All applicants write to American-Israeli Lighthouse, 2109 Broadway, N. Y. 23, N. Y. for applications.

POSITION WANTED: Young man, blind, recent graduate of Eastern Illinois State College with Masters degree in education (English major and foreign-language minor) wants position teaching high school English, French or Spanish for blind or sighted. Write *New Outlook*, Box 6-A.

POSITION WANTED: 35 year old blind man (with a little vision in one eye) seeks position as voice teacher and/or choral director with either school or agency for the blind. Could direct music department and teach piano, harmony, music history, music appreciation, music braille, etc. Can teach Grade 2 braille and arithmetic. Graduate, Perkins Institution, New England Conservatory of Music, B.M. degree and highest honors. Currently taking courses for Masters. Much singing experience. Further information write National Personnel Service, American Foundation for the Blind.

TEACHERS WANTED: The Chicago Public School system is expanding its educational program for the blind. Teachers muse have at least a B.A. degree, be under 49 years of age, pass a physical examination including vision, be fully qualified to teach either kindergarten-primary grades, or grades 3 to 8, and have previous experience teaching the blind. Salary scales as of September, 1955, will range from $3500 to $6750 for 10 months of the year depending on graduate training and experience. For further information write Department of Special Education, 228 North LaSalle St., Chicago 1, Ill.

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